

QPAIC MODIFICATION PROCEDURE

This modification brings out the necessary signals to be used by the QPAIC Buffer chassis for QPA fault determination.

The modification involving the removal of the QPAIC from six service buildings and eight alcoves, total of 26 QPAIC. For each QPAIC, punch two D-sub connector holes on the rear panel, and solder 40 wires to two PCBs.

The procedure is divided into the following steps:

Step I. Removal of QPAIC for service building and alcove.

1. Label all cables that connected to the QPAIC prior to the removal.
2. Add rack location label to the QPAIC prior to the removal. Since each QPAIC performs unique functions, therefore, the QPAIC must be put back to its original rack location after modification.

Part II. Disassemble the QPAIC

1. Remove all the screws from the rear and the bottom panels.
2. Separate the Daughterboard and the motherboard from the rear panel. Leave all the KLOC connectors on the rear panel intact.

Part III. QPAIC rear panel modification

1. Punch hole for a 15-pin male D-sub connector as per the chassis drawing.
2. Punch hole for a 25-pin male D-sub connector as per the chassis drawing.

Part IV. Daughterboard modification

1. Cut the 15-line ribbon cable to the length of 24 inches. Press fit a 15-pin Male-D-Sub connector to one end.
2. Solder the other end of the ribbon cable to the sip-resistor according Table 1.

Part V. Motherboard modification

1. Cut the 25-line ribbon cable to the length of 36 inches. Press fit a 25-pin Male-D-Sub connector to one end.
2. Solder the other end of the ribbon cable to the sip-resistor according to Table 2.

Part VI. Reassemble the QPAIC.

Part VII. Test the modified chassis with the QPAIC test fixture.

Part VIII. Install the modified and tested chassis back to the same rack that was removed.

Signal Name	15-pin Male-D-Sub Pin Number Rear Panel J2	Ribbon cable line number and color	Sip-Resistor Location and Pin Number
1A-QPAQL	1	1 – Brown	RN19-2
DGND	9	2 – Red	DGND (RN21-1)
1B-QPAQL	2	3 – Orange	RN19-4
DGND	10	4 – Yellow	DGND (RN21-1)
2A-QPAQL	3	5 – Green	RN19-6
DGND	11	6 – Blue	DGND (RN21-1)
2B-QPAQL	4	7 – Violet	RN19-8
DGND	12	8 – Grey	DGND (RN21-1)
3A-QPAQL	5	9 – White	RN20-2
DGND	13	10 – Black	DGND (RN21-1)
3B-QPAQL	6	11 – Brown	RN20-4
DGND	14	12 – Red	DGND (RN21-1)
4A-QPAQL	7	13 – Orange	RN20-6
DGND	15	14 – Yellow	DGND (RN21-1)
4B-QPAQL	8	15 – Green	RN20-8

Signal Name	25-pin Male-D-Sub Pin Number Rear Panel J12	Ribbon cable line number and color Main PCB J19	Sip-Resistor Location and Pin Number
5A-QPAQL	1	1 – Brown	RN56-2
DGND	14	2 – Red	DGND (RN57-1)
5B-QPAQL	2	3 – Orange	RN56-4
DGND	15	4 – Yellow	DGND (RN57-1)
6A-QPAQL	3	5 – Green	RN56-6
DGND	16	6 – Blue	DGND (RN57-1)
6B-QPAQL	4	7 – Violet	RN56-8
DGND	17	8 – Grey	DGND (RN57-1)
7A-QPAQL	5	9 – White	RN58-2
DGND	18	10 – Black	DGND (RN57-1)
7B-QPAQL	6	11 – Brown	RN58-4
DGND	19	12 – Red	DGND (RN57-1)
8A-QPAQL	7	13 – Orange	RN58-6
DGND	20	14 – Yellow	DGND (RN57-1)
8B-QPAQL	8	15 – Green	RN58-8
DGND	21	16 – Blue	DGND (RN57-1)
BQLO+	9	17 – Violet	J18-9
BQLO-	22	18 – Grey	J18-22
YQLO+	10	19 – White	J18-12
YQLO-	23	20 – Black	J18-25
BQLI+	11	21 – Brown	J18-1
BQLI-	24	22 – Red	J18-14
YQLI+	12	23 – Orange	J18-2
YQLI-	25	24 – Yellow	J18-15
	13	25 – Green	